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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego CA 92121-1714

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EXAMINER

PEREZ GUTIERREZ, R

ART UNIT	PAPER NUMBER
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2683

12

DATE MAILED: 12/20/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.
09/158,938

Applicant(s)

Karmi et al.

Examiner

Rafael Perez-Gutierrez

Group Art Unit

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☒ Responsive to communication(s) filed on Nov 6, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-62 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-43, 48-58, and 62 is/are rejected.

☒ Claim(s) 44-47 and 59-61 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Nov 6, 2000 is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on Nov 6, 2000 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

1. This action is in response to Applicant's amendment filed on November 6, 2000. **Claims 1-62** are now pending in the present application. **This action is made FINAL.**

Drawings

2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on November 6, 2000 have been acknowledged.
3. The drawings are objected to because **items 204 and 206 in figure 1 are not labeled**. A proper label is required for each component that is only identified by a reference number. In the present application, in figure 1 reference number 204 should be labeled as "mobile termination" or "MT", and reference number 206 should be labeled as "terminal equipment" or "TE". Correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the

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date of application for patent in the United States.

Claims 1-24, 28-42, 53-57, and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by **Tiedemann, Jr. et al. (U.S. Patent # 5,392,287)**.

Consider **claims 1, 2, 14, and 57**, Tiedemann, Jr. et al. clearly disclose a method for reducing power consumption in a mobile communications receiver in which a receiver (mobile station) receives a sequence of messages, each respective message containing a respective sequence number (signature), and wherein the receiver compares the respective sequence number (signature) of any message with at least one sequence number (signature) (column 8 lines 54-64).

Consider **claims 3, 4, and 6**, and **as applied to claims 1 and 2 above**, Tiedemann, Jr. et al. also disclose that the receiver enters an inactive state (sleeps) if a respective sequence number (signature) received matches a corresponding sequence number (signature) from the at least one sequence number (signature) (column 1 line 63 - column 2 line 4 and column 9 lines 16-20).

Consider **claims 5 and 7**, and **as applied to claims 1-4 and 6 above**, Tiedemann, Jr. et al. further disclose that the respective message is transmitted during each successive occurrence of the active state (during the inactive state (sleeping)) (column 1 lines 53-60).

Consider **claims 8, 9, 13, 15, 16 and 62**, and **as applied to claims 1 and 2 above**, Tiedemann, Jr. et al. also disclose that the receiver remains in the active state and wait (listen) for a respective message, until the respective message is received, if a respective sequence number (signature) received does not match a corresponding sequence number (signature) from the at least one sequence number (signature) (column 9 lines 10-16).

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Consider **claims 10-12, 17-22, 28-30, and 33-37**, and **as applied to claims 8, 9, 13, 15, and 16 above**, although not specifically disclose by Tiedemann, Jr. et al., it is inherently taught that the receiver enters the inactive state (sleeps) after the respective message is received (after listening stops, column 9 lines 16-20) and reenters the active state (wake up) after a predetermined time (e.g. 5.2 seconds) since the time range of the slot cycles disclosed by Tiedemann, Jr. et al. is between 2 and 128 seconds (column 4 lines 4-7).

Consider **claims 23, 24, 31, 32, and 39-42**, and **as applied to claims 10-12, 17-22, and 28-30 above**, Tiedemann, Jr. et al. further disclose that the receiver (mobile station) receives a sequence of messages, each respective message containing a respective sequence number (signature), from a cellular telephone system (wireless communication system) (abstract and column 1 line 53 - column 2 line 5).

Consider **claims 38 and 53-56**, and **as applied to claim 1 above**, Tiedemann, Jr. et al. further disclose that the sequence of messages are overhead information (overhead messages, e.g. base station parameters, channel list, access parameters) (column 9 lines 14-16).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 25-27, 43, 48-52, and 58** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tiedemann, Jr. et al. (U.S. Patent # 5,392,287)**.

Consider **claims 25-27**, and as applied to **claims 10-12, 17-22, and 28-30** above, Tiedemann, Jr. et al. doesn't specifically disclose listening for a first, second, and third respective

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message, wherein listening for the third respective message is done after listening for the second respective message, wherein said listening for the second respective message is done after listening for the first respective message.

However, Tiedemann, Jr. et al. does provide a clear teaching that would suggest to a person of ordinary skill in the art that the listening steps of a first, second, and third respective message, as claimed by the Applicant, can be done since Tiedemann, Jr et al. clearly disclose that the respective sequence numbers (signature) of respective messages received at the mobile station are compared with corresponding sequences numbers (signatures) previously stored and if the respective sequence number (signature) of a respective message has changed, the mobile station listens to said respective message (column 8 line 54 - column 9 line 20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Tiedemann, Jr. et al. in order to listen to a respective message having a respective sequence number (signature) that does not match a corresponding sequence number (signature) previously stored and, therefore, saving battery power since only a different message not previously received would be decoded.

Consider **claims 43, 48, 49, and 58**, and **as applied to claim 1 above**, Tiedemann, Jr. et al. further disclose the use of a hash function when assigning slot numbers (column 2 lines 48-52), therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further modify the teachings of Tiedemann, Jr. et al. in order to use a hashing function when providing sequence numbers (signatures) of sixteen or thirty-two bit value

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to messages.

Consider **claims 50-52**, and **as applied to claim 1 above**, although Tiedemann, Jr. et al. doesn't disclose the use of counter when giving a sequence number (signature) to a message, the Examiner takes Official Notice that is well known in the art to use counters when assigning sequence numbers (signatures) to particular sequences of messages.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further modify the teachings of Tiedemann, Jr. et al. with well known teachings in the art in order to provide sequence numbers (signatures) to messages using values that are taken from a counter.

Allowable Subject Matter

7. **Claims 44-47 and 59-61** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office Action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the

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issue process.

Response to Arguments

9. Applicant's arguments filed November 6, 2000 have been fully considered but they are not persuasive.

In the present application, Applicant argues:

a) that Tiedemann, Jr et al. does not disclose "that *each* respective message is provided with a respective signature" since Tiedemann, Jr. et al. disclose that "A message directing the mobile station to update system parameters *may* also have one [or] more fields containing "sequence numbers"" and that "instruction **226** *may* direct the mobile station to update system parameters" (Tiedemann, Jr. et al., column 8 lines 53-57).

The Examiner respectfully disagrees with Applicant's argument because the word "*may*" is not limiting the teachings of Tiedemann, Jr. et al. to only include a sequence number in certain messages and not in each respective message as claimed by the Applicant since the word "*may*" is consistently used through out the entire disclosure of Tiedemann, Jr et al. to define different actions, embodiments, and advantages of the invention claimed by Tiedemann, Jr. et al. Furthermore, on claims 5, 6, 17, and 18, Tiedemann, Jr. et al. clearly claim that **each** message contains an indication (sequence number, signature) provided by a base station. Therefore, the teachings of Tiedemann, Jr. et al. **does** meet the limitation of "providing for each respective

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message a respective signature”.

In the present application, Applicant further argues:

b) that Tiedemann, Jr. et al. does not disclose “that the comparison is done for *any* given respective message” since Tiedemann, Jr. et al. “conducts a comparison only *when* the next message containing such a sequence [number] is received” (Tiedemann, Jr. et al., column 8 lines 59-64).

The Examiner respectfully disagrees with Applicant’s argument because, as explained in response to the argument a) above and since claim 1 recites that a respective message contains a respective signature, Tiedemann, Jr. et al. clearly claim that **each** message contains an indication (sequence number, signature) provided by a base station and that said indication (sequence number, signature) is compared with a stored indication (sequence number, signature) (Tiedemann, Jr. et al., lines 5-8, 11, and 12 of claim 5).

In the present application, Applicant also argues:

c) that the Examiner’s conclusion of obviousness is based upon improper hindsight reasoning (reasonable expectation of success found “*in Applicant’s disclosure*” and use of a hashing function for *assigning sequence numbers*) (page 6, last sentence on paragraph 1 and page 7, last sentence on paragraph 2).

Applicant is reminded that it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed

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invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Therefore, the Examiner respectfully disagrees with Applicant's argument because the motivation (saving power) for modifying the teachings of Tiedemann, Jr. et al. **does** comes from the prior art (Tiedemann, Jr et al., abstract lines 13-16, and column 1 lines 45-47) and the use of hashing functions is well known in the art.

In the present application, Applicant further argues:

d) "that the signature of Applicant's invention is not equivalent to the sequence number of Tiedemann, Jr. et al."

The Examiner respectfully disagrees with Applicant's argument because Applicant's disclose, on page 14 lines 4-6, that "the mobile unit will go back to sleep after receiving the signature because the signature is the **same** as the sequence number received the last time the mobile unit woke up" which clearly contradicts Applicant's argument that the signature of Applicant's invention is not equivalent to the sequence number of Tiedemann, Jr. et al., and therefore provides a clear suggestion to believe that the signature of Applicant's invention is **equivalent** to the sequence number of Tiedemann, Jr. et al. since the process disclose by Tiedemann, Jr et al. is the same process claimed by the Applicant.

In the present application, Applicant also argues:

e) that it is "not [claimed] the use of a counter *per se*, but rather use of a counter in a

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certain manner”

The Examiner respectfully disagrees with Applicant’s argument because the certain manner in which the counter in claims 51-53 is use is well known. There is no substantial difference between the common use of a counter and the certain manner of use of the counter claimed in claims 51-53.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any response to this office action should be **mailed to:**

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Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-6306, (for formal communications intended for entry)

or:

(703) 308-6296, (for informal or draft communications, **please label**

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to

Crystal Park II
2021 Crystal Drive
Arlington, VA 22202
Sixth Floor (Receptionist)

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (703) 308-8996. The examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William G. Trost IV can be reached on (703) 308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6306 and (703) 308-6296.

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Communications via e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise required a signature, may be used by the applicant and should be addressed to [rafael.perez@uspto.gov].


All e-mail communications will be made of record in the application file. PTO employees do not engage in e-mail communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700 or call customer service at (703) 306-5631.

RAFAEL PEREZ-GUTIERREZ
PATENT EXAMINER

Rafael Perez-Gutierrez
R.P.G./rpg

December 18, 2000


EDWARD F. URBAN
PRIMARY EXAMINER